

ABSTRACT OF THE DISCLOSURE

Methods and apparatuses for looking up vectors in parallel using vector table look up operations. In one aspect of the invention, a method to look up a plurality of data items indexed by a vector of indices includes: generating a second vector of indices in a vector register where each index of the second vector of indices is one of a first vector of indices and at least one index in the first vector of indices is replicated as a plurality of duplicated indices in the second vector of indices; and looking up simultaneously a first vector of data items from a plurality of look up tables using the second vector of indices.